Table 2. NORMAL LABORATORY VALUES: URINE

TEST	SPECIMEN	CONVENTIONAL UNITS	SI UNITS
Aldosterone	Urine, 24 h	5–19 µg/24 h	13.9–52.6 nmol/24 h
Amino acids, total	Urine, 24 h	200–400 mg/24 h	14–29 nmol/24 h
Amylase	Urine, timed	6.5–48.1 U/h	—
Calcium, with patient on unrestricted diet	Urine, timed	100–300 mg/day	2.5–7.5 mmol/day
Catecholamines, total	Urine, 24 h	< 100 µg/m^2/24 h	< 591 nmol/m^2/24 h
Chloride	Urine, timed	80–250 mEq/day	80–250 mmol/day
Copper	Urine, 24 h	0–100 µg/24 h	0–1.6 µmol/24 h
Coproporphyrin	Urine, 24 h	50–250 µg/24 h	76–382 nmol/24 h
Cortisol, free	Urine, 24 h	< 90 ug/24 h	< 248 nmol/24 h
Creatine:			
Females	Urine, 24 h	0–100 mg/24 h	0–763 mmol/24 h
Males	Urine, 24 h	4–40 mg/24 h	30–305 mmol/24 h
Creatinine, weight-based	Urine, 24 h	15–25 mg/kg/24 h	133–221 mmol/kg/24 h
D-Xylose excretion 5 h after ingestion of 25 g of D-xylose	Urine, 5 h collection	5–8 g	33–53 mmol
Estriol, females	Urine, 24 h	> 12 mg/24 h	> 42 µmol/24 h
17-Hydroxycorticosteroids, fractionated, adults ≥ 18 yr:			
Cortisol	Urine, 24 h	3.5–4.5 µg/24 h	9.7–12.4 nmol/24 h
Cortisone	Urine, 24 h	17–129 µg/24 h	47–359 nmol/24 h
5-Hydroxyindoleacetic acid (5-HIAA)	Urine, 24 h	2–9 mg/24 h	10.4–46.8 µmol/24 h
17-Ketosteroid, fractionated, females > 12 yr:			
Androsterone	Urine, 24 h	55–1589 µg/24 h	—
Pregnanetriol	Urine, 24 h	59–1391 µg/24 h	—
17-Ketosteroid, fractionated, males > 12 yr:			
Androsterone	Urine, 24 h	234–2703 µg/24 h	—
Etiocholanolone	Urine, 24 h	151–3198 µg/24 h	—
11-Hydroxyandrosterone	Urine, 24 h	66–1032 µg/24 h	—
11-Hydroxyetiocholanolone	Urine, 24 h	17–1006 µg/24 h	—
11-Ketoandrosterone	Urine, 24 h	4–55 µg/24 h	—
11-Ketoetiocholanolone	Urine, 24 h	51–1016 µg/24 h	—
Pregnanetriol	Urine, 24 h	245–1701 µg/24 h	—
Metanephrines, fractionated, normotensive, age ≥ 18 yr:			
Females, metanephrine	Urine, 24 h	30–180 µg/24 h	—
Females, total metanephrines	Urine, 24 h	142–510 µg/24 h	—
Males, metanephrine	Urine, 24 h	44–261 µg/24 h	—
Males, total metanephrines	Urine, 24 h	190–583 µg/24 h	—

Table 2. NORMAL LABORATORY VALUES: URINE (*Continued*)

TEST	SPECIMEN	CONVENTIONAL UNITS	SI UNITS
Metanephrines, fractionated, normotensive males and females 18–29 yr:			
Normetanephrine	Urine, 24 h	103–390 μg/24 h	—
Metanephrines, fractionated, hypertensive males and females:			
Metanephrine	Urine, 24 h	< 400 μg/24 h	
Normetanephrine	Urine, 24 h	< 900 μg/24 h	—
Total metanephrines	Urine, 24 h	< 1300 μg/24 h	—
Microalbumin	Urine, 24 h	< 30 mg/24 h	—
Microalbumin, albumin/creatinine ratio	Urine, random	< 20 μg/mg	—
Osmolality	Urine, random	38–1400 mOsm/kg H_2O	—
Oxalate	Urine, 24 h	0.11–0.46 mmol/specimen*	—
Phosphate, tubular reabsorption	Urine, random	79–94% of filtered load	—
Porphobilinogens	Urine, random	0–0.5 mg/g creatinine	—
Potassium	Urine, 24 h	25–100 mEq/24 h	25–100 mmol/24 h
Protein, total	Urine, 24 h	< 100 mg/24 h	—
Sodium	Urine, 24 h	100–260 mEq/24 h	100–260 mmol/24 h
Uric acid	Urine, 24 h	250–750 mg/24 h	1.48–4.43 mmol/24 h
Urinalysis, routine†			
pH	Urine, random	5–7	—
Urinalysis, routine, dipstick testing†:			
Bilirubin	Urine, random	Negative	—
Blood	Urine, random	Negative	—
Glucose	Urine, random	Negative	—
Ketones	Urine, random	Negative	—
Leukocyte esterase	Urine, random	Negative	—
Nitrites	Urine, random	Negative	—
Protein	Urine, random	Negative	—
Urobilinogen	Urine, random	0.2–1.0 EU	—
Urobilinogen	Urine, 24 h	0.05–2.5 mg/24 h	0.08–4.22 μmol/24 h
Vanillylmandelic acid (VMA)	Urine, 24 h	< 8 mg/24 h	< 40.4 mol/24 h

*Value is based on 24-h collection.

†Normal findings detected by microscopic examination can include a few RBCs (especially in menstruating women), WBCs, epithelial cells, bacteria, yeast cells, crystals (eg, Ca oxalate, triple phosphate, amorphous phosphates and urates), sperm, and unidentifiable materials. Large amounts of these substances or the presence of certain other materials may be abnormal.

EU = Ehrlich units.